BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

* * * * * * *

APPLICATION TO CHANGE WATER RIGHT NO. 76H 30153657 BY YC PROPERTIES LLC	)))	**PRELIMINARY DETERMINATION TO GRANT CHANGE**

* * * * * * *

On October 6, 2021, YC Properties LLC (Applicant) submitted Application to Change An Existing Irrigation Water Right No. 76H 30153657 to change Statement of Claim No. 76H 147802-00 the Missoula Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the Application on its website on October 12, 2021. The Department sent Applicant a deficiency letter under § 85-2-302, Montana Code Annotated (MCA), dated February 7, 2022. The Applicant responded with information dated April 26, 2022. The Application was determined to be correct and complete as of December 12, 2022. An Environmental Assessment for this Application was completed on April 10, 2023.

INFORMATION

The Department considered the following information submitted by the Applicant, which is contained in the administrative record.

Application as filed:

- Application to Change Existing Irrigation Water Right, Form 606-IR
- Attachments
    - Appendix 1 – Water Right Abstracts, Ownership Updates, & Deed
    - Appendix 2 – Project Maps & Aerial Findings Index
    - Appendix 3 – Proposed New Pivot & Sprinkler System Information
    - Appendix 4 – Photographs From Water Rights Inc. Site Visit
    - Appendix 5 – Form 606 – PSA, Place of Storage Addendum
    - Appendix 6 – Authority to Sign Documents
- Maps:
    - July 23, 1954 Aerial Photo Depicting Historical Irrigated Acreage
    - August 2, 1963 Aerial Photo Depicting Historical Irrigated Acreage
    - July 16, 1966 Aerial Photo Depicting Historical Irrigated Acreage
    - July 23, 1954 Aerial Photo Depicting Historical Irrigated Acreage

- August 2, 1963 Aerial Photo Depicting Claimed Point of Diversion, Conveyance, and Historic Irrigated Acreage
- July 16, 1966 Aerial Photo Depicting Claimed Point of Diversion, Conveyance, and Historic Irrigated Acreage
- 1965 Ravalli County Water Resource Survey Map with Ownership
- Water Resource Survey Map showing Irrigated Areas
- Historical Diversion Measurement Location Map
- Proposed Use Map
- Projected Sprinkler Gun Layout Map
- Projected Pivot and Remaining Flood Irrigation Map

Information Received after Application Filed

- Response to Department Deficiency Letter dated April 22, 2022, and received by the Department on April 26, 2022
- Email correspondence clarifying historical point of diversion dated December 6, 2022

Information within the Department's Possession/Knowledge

- DNRC surface and groundwater right records
- 1958 Ravalli County Water Resources Survey maps, field notes, and aerial photos
- Montana Cadastral parcel and property information
- Sawtooth Creek surface water rights information
- Statement of Claim 76H 147802-00 file
- Department Technical Report dated December 12, 2022
- DNRC Environmental Assessment, dated April 10, 2023

The Department also routinely considers the following information. The following information is not included in the administrative file for this Application, but is available upon request. Please contact the Missoula Regional Office at 406-721-4284 to request copies of the following documents.

- DNRC Historic Diverted Volume Standard Methodologies Department Memo, dated September 13, 2012
- DNRC Change in Method of Irrigation Memo, dated December 2, 2015
- DNRC Consumptive Use Methodology Memo, dated March 17, 2010
- DNRC Consumptive Use and Irrecoverable Loss Memo, dated April 15, 2013

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, part 4, MCA).

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. The Applicant is proposing to change Statement of Claim (Claim) 76H 147802-00 which is for 125 acres of flood irrigation from Sawtooth Creek, tributary to the Bitterroot River in Ravalli County. The claimed point of diversion (POD) for this right is the Downing-Vinning Ditch headgate located in the NWNWNW Section 2, T5N, R21W, Ravalli County. The claimed flow rate is 4.0 cubic feet per second (CFS). The claimed place of use (POU) is in the SWNE Section 35, the W2SE Section 35, the E2SW Section 35, and the SWSW Section 35, all in T6N, R21W, Ravalli County. The claimed periods of diversion and use is April 1 to October 31. This water right was included in the Preliminary Decree issued by the Montana Water Court for the Bitterroot River Basin (Basin 76H) on January 14, 1998. Individual elements of the water right proposed for change are shown in Table 1.

Table 1. Water right proposed for change

WR Number	Purpose	Flow Rate	Volume	Period of Use	Point of diversion	Place of use	Priority date	Acres
76H 147802-00	Irrigation	4.00 CFS	N/A	4/1-10/31	NWNWNW, S2, T5N, R21W	SWNE, S35, T6N, R21W; W2SE, S35, T6N, R21W; E2SW, S35, T6N, R21W; SWSW, S35, T6N, R21W	12/31/1882	125

2. Claims 76H 147800-00 and 76H 147804-00 historically provided supplemental water to a portion of the place of use irrigated with Claim 76H 147802-00. Prior to filing this change application, the Applicant submitted two DNRC Ownership Update Divided Interest forms to create child rights that are appurtenant to only their ownership for Claims 76H 147800-00 and 76H 147804-00. Processing these forms created Claims 76H 30158592 and 76H 30158553, which are solely appurtenant to 61 acres owned by the Applicant that are located entirely within

the 125-acre place of use listed on Claim 76H 147802-00. Claim 76H 30158592 is the child right to Claim 76H 147804-00 and Claim 76H 30158553 is the child right to Claim 76H 147800-00. The parent claims, 76H 147800-00 and 76H 147804-00, are still supplemental to the 125-acre place of use for Claim 76H 147802-00 but are not appurtenant to parcels owned by the Applicant. Individual elements of the supplemental water right are shown in Table 2.

Table 2. Supplemental water rights

WR Number	Flow Rate	Purpose	Period of Use	Acres/Place of Use	Point(s) of Diversion	Priority Date
76H 147800-00	1.19 CFS	Irrigation	4/1 - 10/31	24 ac W2SE, S35 31 ac E2SW, S35 35 ac NWSW, S35 18 ac SWSW, S35, T6N, R21W	NWNWNW, S2, T5N, R21W, SESW, S3, T5N, R21W, NENESW, S35, T6N, R21W	12/31/1903
76H 147804-00	0.96 CFS	Irrigation	4/1 - 10/31	24 ac W2SE, S35 31 ac E2SW, S35 9 ac SWSW, S35 T6N, R21W	NWNWNW, S2, T5N, R21W, SESW, S3, T5N, R21W, NENESW, S35, T6N, R21W	12/31/1897
76H 30158592	0.91 CFS	Irrigation	4/1 - 10/31	20 ac SWNE, S35 25.5 ac W2SE, S35 15.5 ac E2SW, S35 T6N, R21W	NWNWNW, S2, T5N, R21W, SESW, S3, T5N, R21W, NENESW, S35, T6N, R21W	12/31/1897
76H 30158553	0.68 CFS	Irrigation	4/1 – 10/31	20 ac SWNE, S35 25 ac W2SE, S35 16 ac E2SW, S35 T6N, R21W	NWNWNW, S2, T5N, R21W, SESW, S3, T5N, R21W, NENESW, S35, T6N, R21W	12/31/1903

CHANGE PROPOSAL

FINDINGS OF FACT

3. The Applicant is proposing to change the point of diversion and add a place of storage to Claim 76H 147802-00. The point of diversion change consists of adding an additional point of diversion in the SWNESW, Section 35, T6N, R21W on Sawtooth Creek, tributary to the Bitterroot River in Ravalli County. This point of diversion will divert water from Sawtooth Creek via a Waterman slide gate and an 8-inch buried pipeline that will run approximately 3,000 feet downgradient to fill an existing 3.0-surface acre reservoir known as Reservoir No. 2. Reservoir No. 2 is located in the S2NWNE of Section 35, T6N, R21W, Ravalli County. The reservoir will serve as a flow-through system as water will only be diverted and conveyed to the reservoir when

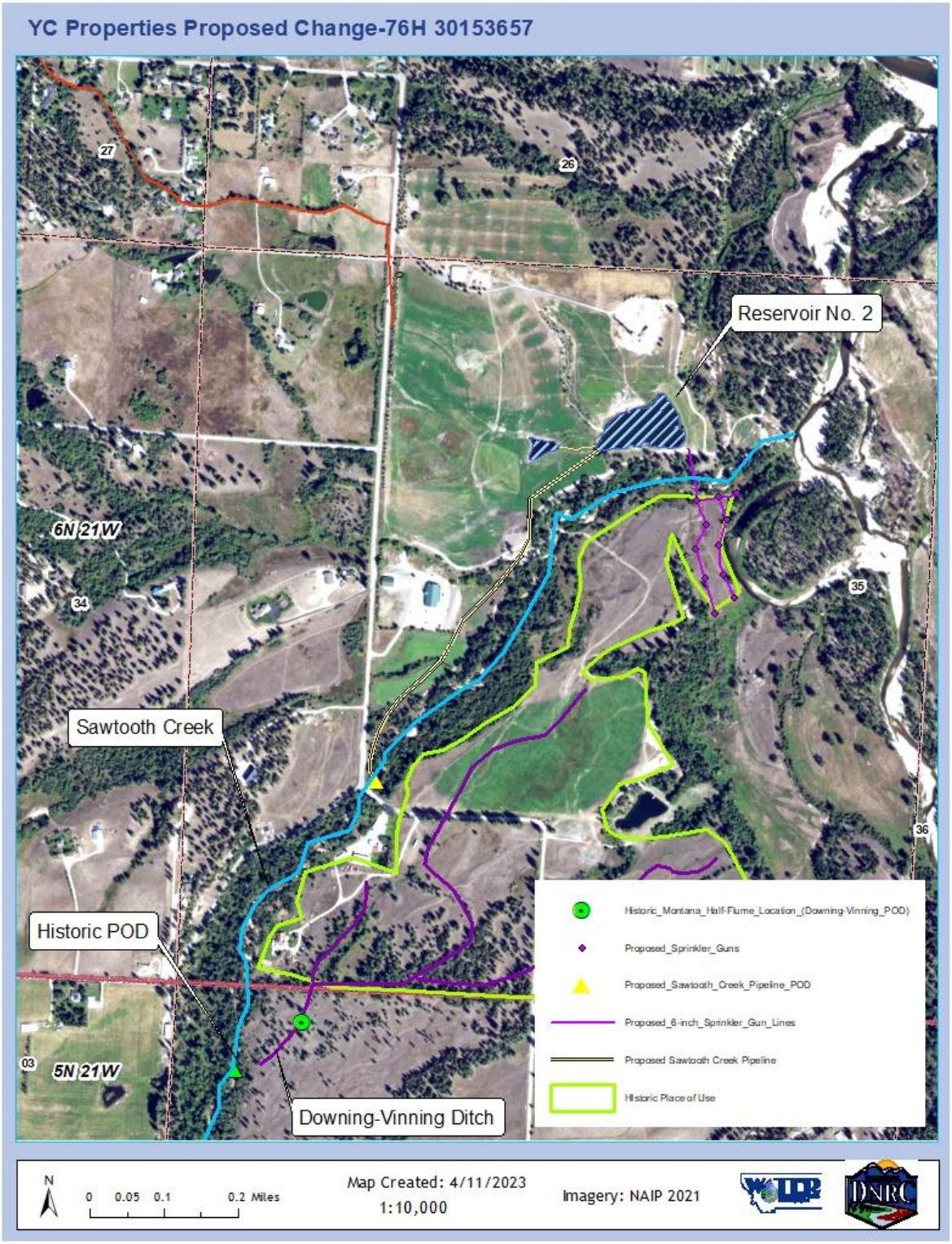
active irrigation using Sawtooth Creek water is occurring. Water diverted from Sawtooth Creek using the new additional diversion at a flow rate of 0.98 CFS will be pumped out of the reservoir using a secondary diversion consisting of 30-HP pump that conveys water to twelve sprinkler guns to irrigate an 8-acre portion of the claimed 125-acre place of use. The remaining 53 acres irrigated by the Applicant using 76H 147802 00 will continue to be irrigated using the historical Downing-Vinning Ditch headgate.

4. Upon authorization of the proposed changes to Claim 76H 147802-00, Claim Nos. 76H 2508-00, 76H 2509-00, 76H 15711-00, and 76H 72226-00 will be associated because they share the same place of storage (Reservoir No. 2).

5. Map 1 shows the proposed elements of this application. This Change Authorization will be subject to the following condition to ensure no adverse effect pursuant to § 85-2-402 (2)(a), MCA.

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER IN THE PIPELINE CONVEYING WATER FROM THE NEW POINT OF DIVERSION ON SAWTOOTH CREEK TO RESERVOIR NO. 2. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL THE AUTHORIZATION TO CHANGE A WATER RIGHT IS PERFECTED AND THE DEPARTMENT RECEIVES A PROJECT COMPLETION NOTICE (FORM 618). IN THE EVENT THAT THE AUTHORIZED FLOW RATE AND VOLUME FOR THE NEW DIVERSION IS EXCEEDED DURING PERFECTION OF THE CHANGE IN WATER USE OR THE APPROPRIATOR FAILS TO SUBMIT ANNUAL WATER MEASUREMENT REPORTS, THE DEPARTMENT MAY CONTINUE TO REQUIRE ANNUAL SUBMISSIONS OF MONTHLY FLOW RATE AND VOLUME RECORDS. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

Map 1: Elements of the proposed change



CHANGE CRITERIA

6. The Department is authorized to approve a change if the applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. Matter of Royston, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an applicant's burden to prove change criteria by a preponderance of evidence is "more probably than not."); Town of Manhattan v. DNRC, 2012 MT 81, ¶8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

> (2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:
> (a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.
> (b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.
> I The proposed use of water is a beneficial use.
> (d) The applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

7. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. E.g., Hohenlohe, at ¶¶ 29-31; Town of Manhattan, at ¶8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991).

HISTORIC USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historic Use

8. Per ARM 36.12.1902(1)(a), historic information for a Statement of Claim must be described as it was used prior to July 1, 1973. The Department will consider the supplemental relationship between Claim Nos. 76H 147802-00, 76H 147800-00, 76H 147804-00, 76H 30158592, and 76H 30158553 when assessing the historic use of the water right being changed.

9. Claim 76H 147802-00 has a priority date of December 31, 1882, and a claimed period of diversion of April 1 – October 31. The historical point of diversion is a headgate located in the NWNWNW Section 2, T5N, R21W, Ravalli County, and the historical means of conveyance is the Downing-Vinning Ditch. The application materials state that water was usually diverted from Sawtooth Creek beginning around April 1st into the Downing-Vinning Ditch and continued until about October 31. The Applicant states that flood irrigation of the 125-acre place of use was continuous throughout the period of diversion due the configuration of the fields allowing for a rotational irrigation pattern. The Applicant states they could dry out portions of the place of use for haying while continuing to irrigate other portions within the place of use. Based on the Applicant's description of how the supplemental rights are used, Claim 76H 147802-00 was the primary source of irrigation water for the 125-acre place of use due to seniority and water availability. Claim 76H 147802-00, with a priority date of December 31,1882, is the most senior water right on Sawtooth Creek. Both Claims 76H 30158592 and 76H 30158553 are junior to Claim 76H 147802-00, and typically provide irrigation water during high water runoff, with the water typically available until mid-June (June 15) most years. Claims 76H 147800-00 and 76H 147804-00 were historically used to supplementally irrigate the 64 southerly acres located entirely within the 125-acre place of use but located on the portion of the place of use not owned by the Applicant. These claims are junior to the water right being changed, with the same priority dates as Claims 76H 30158592 and 76H 30158553 (See FOF 2).

10. Capacity of the Downing-Vinning Ditch diversion was estimated by the Applicant using the highwater mark in the 2-foot throat width Montana Short Parshall Flume located in the Downing-Vinning Ditch. The flume is located approximately 180 feet down ditch from the headgate. The Applicant provided a photograph of the flume with the highwater mark, which is at 1 foot on the staff gage, equating to a flow rate of 8 CFS. The Applicant also provided measurements in the ditch taken on July 22, 2020. These measurements show a ditch that is 2.5 feet wide with a depth

of 1.1 feet of water flowing in ditch. The Applicant estimated a Manning's roughness coefficient (*n*) of 0.025 for an earthen gravelly channel, and a slope of 14%. Based on this information the amount of water flowing in the Downing-Vinning Ditch on July 22, 2020, was 4.29 CFS.

11. There are ten other claims that list the Downing-Vinning Ditch point of diversion. Of these 10, there are five claims also listing the Jacobsen Ditch and/or Downing Ditch as additional points of diversion. The combined total flow rate of the claims is 8.00 CFS, while the combined flow rate of the claims that only list the Downing-Vinning Ditch point of diversion is 4.26 CFS. Of the claims that list the Jacobsen Ditch, only Claim 76H 147800-00 lists a place of use that can be irrigated using the Jacobsen Ditch. The Jacobsen Ditch is located on the westside of Sawtooth Creek and can only irrigate lands west of the creek, while the Downing-Vinning and Downing Ditches only irrigate lands east of the creek. The place of use west of the creek irrigated by the Jacobsen Ditch consists of 43 acres in the NWSW and SWSW of Section 35. Based on a GPM per acre apportionment of 4.97 GPM per acre (1.87 CFS x 448.8 GPM = 839.26 GPM / 169 pre-split acres = 4.97 GPM per acre), these acres would receive 0.48 CFS (4.97 GPM per acre x 43 acres / 448.8 GPM) out of the 1.19 CFS for Claim 76H 147800-00. Considering Claim 76H 147800-00 contributed 0.71 CFS (1.19 CFS – 0.48 CFS in the Jacobsen Ditch) into the Downing-Vinning Ditch, the combined total flow rate of water that could legally be diverted into the Downing-Vinning Ditch is 7.52 CFS. Based on this information, the Department finds the maximum historical flow rate for Claim 76H 147802-00 is 4 CFS.

12. The claimed place of use is 125 acres, including 20 acres in the SWNE, 49 acres in the W2SE, 47 acres in the E2SW, and 9 acres in the SWSW, all in Section 35, T6N, R21W, Ravalli County. A Department review of the Water Resource Survey (WRS) aerial photo (# CNR-1P-190) dated July 23, 1954, finds 125 acres were historically irrigated within the claimed place of use. A Department review of USDA aerial photo (photo # 179-70) dated 8/2/1979, further supports the historical irrigation of 125 acres. The Applicant submitted historic imagery from 1954, 1963, and 1966 to support the historical irrigation of 61 acres on YC Properties portion of the 125-acre total place of use for Claim 76H 147802-00. The Water Resource Survey field notes shows 160 Miner's Inches delivered by the Downing Ditch to Sam Downing, the landowner in 1957, for use on 110 acres. Based on this information, the Department finds 125 acres were historically irrigated with Claim 76H 147802-00.

13. The Applicant elected to have the Department calculate historic consumptive use per ARM 36.12.1902(16). The historical method of irrigation was flood irrigation which used contour ditches and laterals to distribute water throughout the place of use. The weather station used for calculating historic consumptive use is the Hamilton weather station, which represents a similar elevation and is the closest station to the place of use. The seasonal evapotranspiration (ET) of flood irrigation for the area, as identified by the Natural Resources Conservation Service (NRCS) Irrigation Water Requirements program (IWR) is 19.93 inches. By applying the Ravalli County management factor for 1964 to 1973 of 79.5%, the adjusted ET is 15.84 inches or 1.32 feet. Therefore, the crop consumptive volume for the 125 irrigated acres is 165 AF (15.84 inches / 12 inches/foot x 125 acres = 165 AF).

14. The calculated field slope is approximately 2% from the highest point to the lowest point of irrigation. The Department applied an on-farm efficiency of 55% (contour ditch with design slope of 1.5-3.0%) for the historical flood irrigated field. On-farm efficiency refers to the percent of water delivered to the field that is used by the crop. Applying an on-farm efficiency of 55% to the 165.1 AF crop consumptive use leads to a field applied volume of 300.1 AF (165.1 AF / 55% = 300.1 AF).

15. For flood irrigation, the Department assumes 5% of the field application volume is consumed through irrecoverable losses. These losses account for evaporation of water delivered to the field but not used by the crop. The Department calculates that an additional 15.01 AF are consumed as non-crop related evaporative losses based on a field application volume of 300.1 AF (300.1 AF x 5% = 15.01 AF). The historical consumed volume related to irrigation of the 125 acres is 180.1 AF. Table 3 summarizes the variables considered in the Department's assessment of historic use for Claim 76H 147802-00.

Table 3. Calculated total consumption for historical POU

Ravalli County Flood/Sprinkler ET *(Inches)*	Ravalli County 1964-1973 Management Factor	Historic Acres	HCV AF *(minus IL)*	On-farm Efficiency	Field Application (AF)	Historic Irrecoverable Losses *(IL) Flood 5%* (AF)	**HCV AF *(Including IL)***
19.93	79.5%	125	165.1	55%	300.1	15.01	**180.1**

16. According to the Applicant, irrigation of the 125-acre historical place of use typically began on April 1 and ended around October 31 (213 days). Supplemental Claim Nos. 76H 147802-00

(4.0 CFS), 76H 147800-00 (1.19 CFS), 76H 147804-00 (0.96 CFS), 76H 30158592 (0.91 CFS), and 76H 30158553 (0.68 CFS) were used to irrigate acreage within the 125-acre place of use. According to information provided by the Applicant, the supplemental Claims were used from April 1 until June 15 (106 days). During this period, Claim 76H 147802-00 provided 55.15% of the total amount of water historically applied to the field for the 64 acres comprising the southerly portion of the place of use, and 55.11% of the water historically applied to the Applicant's 61 acres within the place of use. The historical consumed (HCV) and field application volumes for the historical 64-acre and 61-acre places of use during this period are 34.2 AF and 56.91 AF, respectively, based on monthly IWR values calculated using the NRCS IWR program for the Hamilton weather station. After June 15 when all junior rights are out of priority, Claim 76H 147802-00 provided 100% of all water applied to the historical place of use, a volume of 145.9 AF was consumed during irrigation, and the historical field application volume was 243.17 AF. Based on the percentages of irrigation water provided by Claim 76H 147802-00 during the two different periods, the historical consumed volume (HCV) including the irrecoverable losses attributable to the water right being changed is 164.7 AF (9.64 AF + 9.18 AF + 145.9 AF= 164.72 AF). The historic field application attributable to Claim 76H 147802-00 based on this same supplemental relationship is 247.6 AF (31.38 AF + 243.17 AF = 247.55 AF).

17. Pursuant to ARM 36.12.1902(10)(a), "conveyance losses" refer to the portion of water diverted at a headgate that does not arrive at an irrigated place of use. The annual ditch evaporation rate as recorded at the Hamilton weather station in Ravalli County is 3.24 feet (Potts, 1988), and the period-adjusted evaporation rate for a 106-day period of diversion (when all five supplemental claims are in priority) is 0.94 feet; the period-adjusted evaporation rate for a 107-day period of diversion (when all claims except Claim 76H 147802-00 falls out of priority) is 0.95 feet. Site soils below the flow level of the Downing-Vinning Ditch are characterized as gravelly coarse sandy loam by the NRCS SSURGO Web Soil Survey. Based on this information and per Figure 2-50 (NEH, 1993) in the DNRC's Historic Diverted Volume Standard Methodologies memorandum dated September 13, 2012, the ditch loss rate for the Barley Ditch is 2.2 ft3/ft2/day. The dimensions and wetted perimeters for the Downing-Vinning Ditch taken near the Montana half-flume on the ditch are 2.5 feet and 4.7 feet, respectively. Based on this information, total volume of conveyance losses in the Downing-Vinning Ditch during the 106 days (April 1 – June 15) when all five supplemental claims are in priority is 23.2 AF. The total flow rate diverted into the Downing-Vinning Ditch from Sawtooth Creek during this period is 7.52 CFS (per FOF No. 11).

Claim 76H 147802-00 supplies approximately 55% of the total flow rate in the ditch based on claimed flow rates. Based on these percentages, the portion of conveyance losses in the Downing-Vinning Ditch attributed to Claim 76H 147802-00 is 12.8 AF (23.2 X 55%). The remaining 10.4 AF of historical conveyance losses in the Downing-Vinning Ditch during this period are attributed to the other water rights that list the ditch as a means of conveyance. Table 4 summarizes the variables considered in the Department's assessment of conveyance losses between April 1 and June 15 in the Downing-Vinning Ditch. After June 15, Claim 76H 147802-00 provides 100% of the flow in the Downing-Vinning Ditch, therefore the conveyance losses attributed to Claim 76H 147802-00 after June 15 is 22.5 AF (Table 5 summarizes the variables considered in the Department's assessment of conveyance losses for this period). Based on this information, the Department finds the total volume of historical conveyance losses in the Downing-Vinning Ditch attributed to Claim 76H 147802-00 is 35.3 AF (12.8 AF + 22.5 AF).

18. In the Deficiency Response received by the Department on [DATE], the Department considered a ditch length of 0.83 miles (approximately 4,380 feet) to calculate conveyance losses. The Department found a length of 844 feet for the Downing-Vinning Ditch extending from the point of diversion to the location where the ditch meets the historic place of use in the SWSW boundary of Section 35. Based on this information, the Department considered a ditch length of 844 feet when calculating historic conveyance losses.

Table 4. Variables considered in the Department's assessment of total conveyance losses in Downing-Vinning Ditch from April 1 – June 15 when Claims 76H 147800-00, 76H 30158553, 76H 147804-00, 76H 30158592 and 76H 147802-00 are in use.

Seepage Loss:	Ditch Wetted Perimeter (Feet)	Ditch Length *(*Feet)	Ditch Loss Rate (ft^3/ft^2/day)	Days Irrigated	Seepage Loss *(/43,560)*
	4.7	844	2.2	106	21.2
Vegetation Loss:	% loss/mile	Flow Rate (CFS)	Days Irrigated	Ditch Length (miles)	Vegetation Loss (*2)
	0.0075	7.27	106	0.16	1.91
Ditch Evaporation:	Ditch Width (Feet)	Ditch Length (Feet)	Annual Evaporation (Potts)	Period Adjusted Evaporation	Ditch Evaporation *(/43,560)*
	2.5	844	3.24	0.94	0.05

Conveyance loss volume for Claim 76H 147802-00 from April 1 to June 15 is 23.2 AF * 55% of flow in ditch = 12.8 AF conveyance loss

Table 5. Variables considered in the Department's assessment of total conveyance losses in Downing-Vinning Ditch from June 16 – October 31 when only Claim 76H 147802-00 is in use.

Seepage Loss:	Ditch Wetted Perimeter (Feet)	Ditch Length *(*Feet)	Ditch Loss Rate (ft^3/ft^2/day)	Days Irrigated	Seepage Loss *(/43,560)*
	4.7	844	2.2	107	21.4
Vegetation Loss:	% loss/mile	Flow Rate (CFS)	Days Irrigated	Ditch Length (miles)	Vegetation Loss (*2)
	0.0075	4	107	0.16	1.03
Ditch Evaporation:	Ditch Width (Feet)	Ditch Length (Feet)	Annual Evaporation (Potts)	Period Adjusted Evaporation	Ditch Evaporation *(/43,560)*
	2.5	844	3.24	.95	0.05

Historical Conveyance Losses when Claim 76H 147802-00 is in priority = 22.48 (21.4 AF + 1.03 AF + 0.05 AF)
Total annual conveyance loss for 76H 147802-00 equals 35.3 AF (12.8 AF + 22.5 AF)

19. According to ARM 36.12.1902(10), historical diverted volume is equal to the sum of the field application volume and volume of conveyance losses. Based on the information provided in FOF Nos. 8 – 18, the Department finds the total historical diverted volume for Claim 76H 147802-00 is 282.9 AF (247.6 AF + 35.3 AF). Table 6 summarizes the historic use for Claim 76H 2509-00.

Table 6: Historical Use

Water Right Number	**Flow Rate (CFS)**	**Diverted Volume (AF)**	**Consumed Volume (AF)**	**Period of Use**	**Points of Diversion**	**Place of Use**
76H 147802-00	4.0	282.9	164.7	4/11 to 10/31	NWNWNW Sec 2, T5N, R21W	20 acres SWNE, 49 acres W2SE, 47 acres E2SW, 9 acres SWSW Sec. 35, T6N R21W

FINDINGS OF FACT – Adverse Effect

20. The purpose of this change is to add a second point of diversion in the SWNESW, Section 35, T6N, R21W on Sawtooth Creek for an underground pipeline that will deliver a portion of the Applicant's Sawtooth Creek water to Reservoir No. 2 where it will be pumped using a secondary diversion for pivot and sprinkler irrigation of an 8-acre field within the Applicant's 61-acre portion of the historical place of use. Due to the Applicant's conveyance of Sawtooth Creek water to Reservoir No. 2, which is used as a central pumping station for several of the Applicant's other

water rights, this change also proposes to add Reservoir No. 2 as a place of storage. The Applicant is not proposing to change the flow rate, diverted volume, place of use, period of diversion, or purpose of this water right.

21. The existing historical point of diversion for the Downing-Vinning Ditch on Sawtooth Creek will not be altered in any way and the historical diverted flow rate using both the historical and new additional point of diversion will be the same, thereby not impacting other Sawtooth Creek water users. The Applicant is the furthest downstream water user on Sawtooth Creek and the Downing-Vinning Ditch and is the most senior right on Sawtooth Creek, therefore is dependent on all users upstream to receive their allocation of water. As the most senior water user on Sawtooth Creek, the Applicant is not subject to call for water from other Sawtooth Creek water users. The Downing-Vinning Ditch is the last ditch on Sawtooth Creek and the Applicant is proposing to add an additional point of diversion 0.23 miles (1,214.4 feet) downstream of the Downing-Vinning Ditch point of diversion. Due to the location of the proposed point of diversion being downstream of all other Sawtooth Creek diversions, other Sawtooth Creek water users will not be impacted.

22. The proposed place of storage (Reservoir No. 2) has a surface area of 3.0 acres and a total capacity of 28.5 AF. No water diverted from Sawtooth Creek is required to fill the proposed reservoir or to replace evaporative losses from its surface. Reservoir No. 2 is filled by Provisional Permit Nos. 76H 15711-00 and 76H 72226-00. Permit 76H 15711-00 diverts water from Sawdust Creek and has a volume of 189.1 AF for fisheries purposes in two of the Applicant's reservoirs, including proposed Reservoir No. 2. The other reservoir on this right, Reservoir No. 1, is not included in this application and will not be filled using Sawtooth Creek water. Permit 76H 72226-00 diverts groundwater via two wells and includes Reservoir No. 2 as a place of use for stock watering and irrigation storage. The evaporative losses for Reservoir No. 2 are included in the volume authorized for Permit 76H 72226-00. Reservoir No. 2 will be operated as a flow through reservoir for Claim 76H 147802-00 and not a true place of storage, with water being diverted into the reservoir as needed when the secondary irrigation pump is operating for sprinkler irrigation of an 8-acre portion of the historical place of use for Claim 76H 147802-00. Since the initial fill and evaporative losses are already covered with other active water right permits and authorizations, there will be no increase in historical consumptive use associated with adding the proposed place of storage to Claim 76H 147802-00.

23. The Applicant states that the historical headgate diversion on Sawtooth Creek is operational and can be closed to cease diversion. The Downing-Vinning Ditch has a Montana Short Flume that is used to measure the amount of water diverted into the ditch. The Applicant's proposed new point diversion will consist of a slide gate that can control or cease the amount of water diverted into the proposed pipeline. The Applicant will measure water diverted into the pipeline using an in-line flow meter to ensure that the historical diverted flow rate from Sawtooth Creek is not exceeded when both diversions are in use. A water commissioner, if appointed, would be able to control this diversion and use existing measurement devices to administer this right. The Applicant will be subject to the following measurement condition:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER IN THE PIPELINE CONVEYING WATER FROM THE NEW POINT OF DIVERSION ON SAWTOOTH CREEK TO RESERVOIR NO. 2. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL THE AUTHORIZATION TO CHANGE A WATER RIGHT IS PERFECTED AND THE DEPARTMENT RECEIVES A PROJECT COMPLETION NOTICE (FORM 618). IN THE EVENT THAT THE AUTHORIZED FLOW RATE AND VOLUME FOR THE NEW DIVERSION IS EXCEEDED DURING PERFECTION OF THE CHANGE IN WATER USE OR THE APPROPRIATOR FAILS TO SUBMIT ANNUAL WATER MEASUREMENT REPORTS, THE DEPARTMENT MAY CONTINUE TO REQUIRE ANNUAL SUBMISSIONS OF MONTHLY FLOW RATE AND VOLUME RECORDS. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

24. The Department finds there will be no adverse effect to other water users resulting from the proposed additional point of diversion and new place of storage under the terms and conditions set forth in this Preliminary Determination.

BENEFICIAL USE

FINDINGS OF FACT

25. The Applicant is not proposing to change the flow rate or volume of water historically diverted from Sawtooth Creek for irrigation purposes. Depending on irrigation practices, the Applicant will divert all their portion of Claim 76H 147802-00 from the historical Sawtooth Creek

point of diversion into the Downing-Vinning Ditch headgate (2.08 CFS out of 4 CFS) or reduce their share of water diverted at the historical headgate by the amount diverted at the new additional diversion (up to 0.98 CFS). The amount of water requested to be diverted at the new diversion is based on sprinkler irrigation needs and secondary diversion capacity. Once water is conveyed into Reservoir No. 2 it will be secondarily diverted using a 30 HP electric pump to the 8-acre sprinkler irrigated field via a pipeline. The flow rate required for the 8-acre field is based on the sprinkler irrigation system design, which will operate between 330 GPM and 440 GPM depending on the number of sprinklers in operation.

ADEQUATE DIVERSION

FINDINGS OF FACT

26. The Applicant's current (and historical) diversion structure consists of the Downing-Vinning Ditch headgate on Sawtooth Creek. Based on the historical use information and conveyance dimensions provided by the Applicant, it is adequate to supply the claimed flow rate and volume (see FOF10-11). There will be no changes to the means of diversion or conveyance of water to the place of use associated with this headgate. The Downing-Vinning Ditch headgate and ditch system have been in constant operation for over 100 years and the Applicant owns the most senior Sawtooth Creek water right. While the method of irrigation on the place of use is changing, there is no proposed change to the location of irrigated acres or the place of use itself.

27. The proposed additional point of diversion located in the SWNESW, Section 35, T6N, R21W on Sawtooth Creek will be used to divert water into an enclosed pipeline. A waterman slide gate in Sawtooth Creek will control water entering the pipeline. The new point of diversion will only divert water into the pipeline when sprinkler irrigation of 8 acres within the Applicant's 61-acre portion of the 125-acre historical place of use is occurring. The 8-inch pipeline will extend approximately 3,000 feet to Reservoir No. 2. Water will then be diverted from Reservoir No. 2 using a 30-HP pump to sprinkler irrigate 8 acres in the SWNE of Section 35 at a rate of 330-440 GPM. The Applicant may divert their entire 2.08 CFS portion of Claim 76H 147802-00 into the Downing-Vinning Ditch when the new additional diversion is not being used. When the new additional diversion is being operated, the Applicant must reduce their portion of the water being diverted into the Downing-Vinning Ditch by the amount being diverted into the new additional diversion.

28. The Department finds the means of diversion, construction, and operation of the appropriation works are adequate for the beneficial use

POSSESSORY INTEREST

FINDINGS OF FACT

29. The Applicant signed the affidavit on the application form affirming the Applicant has possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. The 125-acre place of use is located on four different parcels with three different ownerships. The Applicant owns 61 historically irrigated acres, with the remaining 64 historically irrigated acres owned by two different parties. The proposed change in water use only pertains to the portion of the place of use owned by the Applicant.

CONCLUSIONS OF LAW

HISTORIC USE AND ADVERSE EFFECT

30. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. McDonald v. State, 220 Mont. 519, 530, 722 P.2d 598, 605 (1986)(beneficial use constitutes the basis, measure, and limit of a water right); Featherman v. Hennessy, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911)(increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940)(appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924)("quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does

not own the water. He has a right of ownership in its use only"); Town of Manhattan, at ¶ 10 (an appropriator's right only attaches to the amount of water actually taken and beneficially applied); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review,* Pg. 9 (2011)(the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to MWUA change provisions); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004).[1]

31. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 96 P. 727, 731 (1908); Quigley, 110 Mont. at 505-11,103 P.2d at 1072-74; Matter of Royston, 249 Mont. at 429, 816 P.2d at 1057; Hohenlohe, at ¶¶43-45.[2]

32. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the "historic use" of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department's obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or

[1] DNRC decisions are available at:
http://www.dnrc.mt.gov/wrd/water_rts/hearing_info/hearing_orders/hearingorders.asp

[2] See also Holmstrom Land Co., Inc., v. Newlan Creek Water District,185 Mont. 409, 605 P.2d 1060 (1979); Lokowich v. Helena, 46 Mont. 575, 129 P. 1063(1913); Thompson v. Harvey, 164 Mont. 133, 519 P.2d 963 (1974)(plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley, 159 Mont. 72, 495 P.2d 186 (1972)(appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909)(successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, Gassert v. Noyes, 18 Mont. 216, 44 P. 959(1896)(change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff's subsequent right).

potential for adverse effect.[3] A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. Quigley, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); Royston, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review,* Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of Application For Beneficial Water Use Permit By City of Bozeman, *Memorandum*, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9,1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).[4]

[3]A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under §85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. §85-2-234, MCA

[4] Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District, 717 P.2d 955, 959 (Colo. 1986)("[O]nce an appropriator exercises his or her privilege to change a water right … the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right … which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right."); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo.,1999); Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)("We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation); Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right … he shall file a petition requesting permission to make such a change …. The change … may be allowed provided that the quantity of water transferred … shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557,

33. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. E.g., Hohenlohe, at ¶44; Rock Creek Ditch & Flume Co. v. Miller, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); Newton v. Weiler, 87 Mont. 164, 286 P. 133(1930); Popham v. Holloron, 84 Mont. 442, 275 P. 1099, 1102 (1929); Galiger v. McNulty, 80 Mont. 339, 260 P. 401 (1927); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909); Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731; Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; In the Matter of Application for Change Authorization No. G (W)028708-411 by Hedrich/Straugh/Ringer, DNRC Final Order (Dec. 13, 1991); In the Matter of Application for Change Authorization No. G(W)008323-G76l By Starkel/Koester, DNRC Final Order (Apr. 1, 1992); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004); ARM 36.12.101(56)(Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).[5]

34. Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. Royston, 249 Mont. at 431, 816 P.2d at 1059-60; Hohenlohe, at ¶¶ 45-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731. Noted Montana Water Law scholar Al Stone explained that the water right holder who seeks to change a water right is unlikely to receive the full amount claimed or historically used at the original place of use due to reliance upon return flows by other water users. Montana Water Law, Albert

564 -566 (Wyo,1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

[5] The Montana Supreme Court recently recognized the fundamental nature of return flows to Montana's water sources in addressing whether the Mitchell Slough was a perennial flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell's flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass'n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31,43, 198 P.3d 219, ¶¶ 22, 31,43(*citing* Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

W. Stone, Pgs. 112-17 (State Bar of Montana 1994).

35. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full-service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. See MacDonald, 220 Mont. at 529, 722 P.2d at 604; Featherman, 43 Mont. at 316-17, 115 P. at 986.

36. In Royston, the Montana Supreme Court confirmed that an applicant is required to prove lack of adverse effect through comparison of the proposed change to the historic use, historic consumption, and historic return flows of the original right. 249 Mont. at 431, 816 P.2d at 1059-60. More recently, the Montana Supreme Court explained the relationship between the fundamental principles of historic beneficial use, return flow, and the rights of subsequent appropriators as they relate to the adverse effect analysis in a change proceeding in the following manner:

> The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the "amount historically consumed" and the water that re-enters the stream as return flow. . . .
>
> An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator "is entitled to have the water flow in the same manner as when he located," and the appropriator may insist that prior appropriators do not affect adversely his rights.
>
> This fundamental rule of Montana water law has dictated the Department's determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.
>
> We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe, at ¶¶ 42-45 (internal citations omitted).

37. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type evidence and analysis required for an applicant to meet its burden of proof. ARM 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. ARM 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic diversions and return flows. ARM 36.12.1901 and 1903.

38. Applicant seeks to change existing water rights represented by its Water Right Claims. The "existing water rights" in this case are those as they existed prior to July 1, 1973, because with limited exception, no changes could have been made to those rights after that date without the Department's approval. Analysis of adverse effect in a change to an "existing water right" requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973. In McDonald v. State, the Montana Supreme Court explained:

> The foregoing cases and many others serve to illustrate that what is preserved to owners of appropriated or decreed water rights by the provision of the 1972 Constitution is what the law has always contemplated in this state as the extent of a water right: such amount of water as, by pattern of use and means of use, the owners or their predecessors put to beneficial use. . . . the Water Use Act contemplates that all water rights, regardless of prior statements or claims as to amount, must nevertheless, to be recognized, pass the test of historical, unabandoned beneficial use. . . . To that extent only the 1972 constitutional recognition of water rights is effective and will be sustained.

220 Mont. at 529, 722 P.2d at 604; see also Matter of Clark Fork River Drainage Area, 254 Mont. 11, 17, 833 P.2d 1120 (1992).

39. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in Ravalli and Missoula Counties, 295 Mont. 447, 453, 984 P.2d 151, 155 (1999)(Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust, 280 Mont. 196, 213, 930 P.2d 37, 47 (1996)(Water Resources Survey used as evidence in a prescriptive

ditch easement case); Olsen v. McQueary, 212 Mont. 173, 180, 687 P.2d 712, 716 (1984) (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).

40. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. See MacDonald, 220 Mont. at 529, 722 P.2d at 604; Featherman, 43 Mont. at 316-17, 115 P. at 986; Trail's End Ranch, L.L.C. v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004).

41. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. ARM 36.12.1902 (16). In the alternative an applicant may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under ARM (FOF No.13).

42. If an applicant seeks more than the historic consumptive use as calculated by ARM 36.12.1902 (16), the applicant bears the burden of proof to demonstrate the amount of historic consumptive use by a preponderance of the evidence. The actual historic use of water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., supra; Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization "duty of water").

43. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 76H 147802-00 of 282.9 AF diverted volume and 4.0 CFS flow rate with a consumptive use of 164.7 AF. (FOF Nos. 13 - 19)

44. Based upon the Applicant's comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. § 85-2-402(2)(b), MCA. (FOF Nos. 20—24)

BENEFICIAL USE

45. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§ 85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: "[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . ." McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under § 85-2-402, MCA, and new beneficial permits under § 85-2-311, MCA. ARM 36.12.1801. The amount of water that may be authorized for change is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel*, Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court (2003) (*affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); Worden v. Alexander, 108 Mont. 208, 90 P.2d 160 (1939); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924); Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, *Order Affirming DNRC Decision*, Pg. 3 (2011)(citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet); Toohey v. Campbell, 24 Mont. 13, 60 P. 396 (1900)("The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes."); § 85-2-312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

46. Applicant proposes to add a second point of diversion for a pipeline to improve irrigation efficiency which is a recognized beneficial use. § 85-2-102(5), MCA. Applicant has proven by a

preponderance of the evidence that irrigation is a beneficial use and that 282.9 AF of diverted volume and 4.0 CFS flow rate of water for irrigation is the amount needed to sustain the beneficial use § 85-2-402(2)(c), MCA (FOF No. 25)

ADEQUATE MEANS OF DIVERSION

47. Pursuant to § 85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. Crowley v. 6th Judicial District Court, 108 Mont. 89, 88 P.2d 23 (1939); In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).

48. Pursuant to § 85-2-402 (2)(b), MCA, applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. (FOF Nos. 26—28)

POSSESSORY INTEREST

49. Pursuant to § 85-2-402(2)(d), MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. See also ARM 36.12.1802

50. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (FOF No. 29)

PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 76H 30153657 should be granted subject to the following.

The Department determines the Applicant may add an additional point of diversion and place of storage to Claim 76H 147802-00. The additional point of diversion will consist of a slide gate and pipeline on Sawtooth Creek located in the SWNESW of Section 35, T6N, R21W Ravalli County. The Applicant may divert up to a flow rate of 0.98 CFS through the additional new point of diversion; the maximum flow rate that may be diverted through the new point of diversion and the historical point of diversion at the Downing-Vinning Ditch headgate at the same time with Claim 76H 147802-00 is 4 CFS. The new place of storage consists of a 28.5 AF capacity reservoir (Reservoir No. 2) located in the S2NWNE of Section 35, T6N, R21W. The period of diversion will be April 1 to October 31. The Applicant will continue to irrigate their portion of the 125-acre historical place of use, consisting of 61 acres in the SWNE, NWSE, NESW, and SWSE of Section 35, T6N, R 21W.

This change will be subject to the following water measurement condition:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER IN THE PIPELINE CONVEYING WATER FROM THE NEW POINT OF DIVERSION ON SAWTOOTH CREEK TO RESERVOIR NO. 2. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL THE AUTHORIZATION TO CHANGE A WATER RIGHT IS PERFECTED AND THE DEPARTMENT RECEIVES A PROJECT COMPLETION NOTICE (FORM 618). IN THE EVENT THAT THE AUTHORIZED FLOW RATE AND VOLUME FOR THE NEW DIVERSION IS EXCEEDED DURING PERFECTION OF THE CHANGE IN WATER USE OR THE APPROPRIATOR FAILS TO SUBMIT ANNUAL WATER MEASUREMENT REPORTS, THE DEPARTMENT MAY CONTINUE TO REQUIRE ANNUAL SUBMISSIONS OF MONTHLY FLOW RATE AND VOLUME RECORDS. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to § 85-2-307, MCA. The Department will set a

deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§ 85-2-310, -312, MCA.

DATED this 11th day of April 2023.

/Original signed by Jim Nave/

Jim Nave, Manager
Missoula Regional Office
Department of Natural Resources
and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 11th day of April 2023, by first class United States mail.

YC PROPERTIES
1050 SATCOM LANE
MELBOURNE, FL 32940

WATER RIGHTS INC
ATTN: LEE YELIN
PO BOX 9285
MISSOULA, MT 59807

MARKETTE & CHOUINARD, P.C.
ATTN: DAVID MARKETTE
P.O. BOX 515
HAMILTON, MT 59840

Heather McAdams, (406) 542-5883